ABSTRACT OF THE DISCLOSURE

A diagnostic system in which the accuracy of the diagnosis of the deterioration state of a catalyst in a catalytic converter for cleaning the exhaust gas of an internal combustion engine is enhanced without incurring a rise in cost. The temperature of the catalyst is estimated using the operating-state signal (for example, the flow rate of intake air or the width of a fuel injection pulse) of the engine by a diagnostic device. The conversion efficiency of the catalyst calculated from the outputs of oxygen sensors is corrected using the estimated temperature by the diagnostic device. The deterioration state of the catalyst is diagnosed on the basis of the corrected temperature by the diagnostic device.